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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,470	11/30/2000	Sang-Duk Lee	6192.0169.AA	1695

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07/26/2002

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EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 07/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/725,470

Applicant(s)

LEE ET AL.

Examiner

Timothy L Rude

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9, 12-14 and 23 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 10, 11 and 15-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto, USPAT 5,442,470.

As to claim 1, Hashimoto discloses (summary of the invention, col. 2, line 31 through col. 3, line 26) an embodiment shown in Figure 4 (col. 5, line 18 through col. 7, line 52).

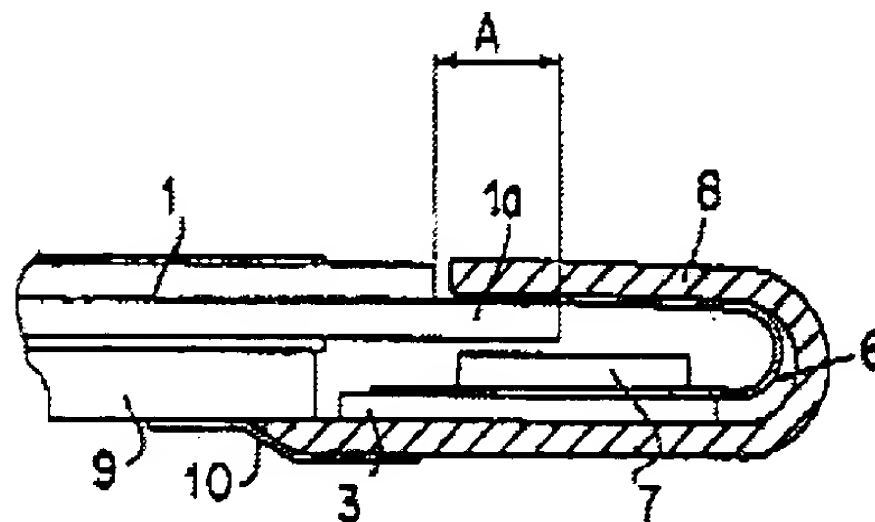


FIG. 4

Figure 4 shows a liquid crystal display device comprising: a display unit having a liquid crystal display panel, 1, and a flexible printed circuit, 6, which is attached to the

Art Unit: 2871

liquid crystal display panel, for applying driving signals to said liquid crystal display panel for driving the liquid crystal panel; a light conductive plate, 9, (Applicant's back light assembly) which provides a light to the display unit; a glass plate to which everything is attached, 1a, (serves as Applicant's mold frame) for receiving the liquid crystal display panel and the back light assembly; a chassis, being coupled to said mold frame (not shown, see Figure 10), for fixing said liquid crystal display panel and said back light assembly to said mold frame; and a frame member, 8, that has a moderate level of resiliency for nipping the liquid crystal display panel, 1, and the circuit board, 3, (col. 5, lines 58-68) (Applicant's support means for supporting the flexible circuit board towards the mold frame).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-5, 8, 9, 12-14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, USPAT 5,442,470.

As to claim 2, Hashimoto discloses in Figure 7 a recess for receiving the integrated circuit, 7, in the frame member, 8, (col. 9, lines 3-7).

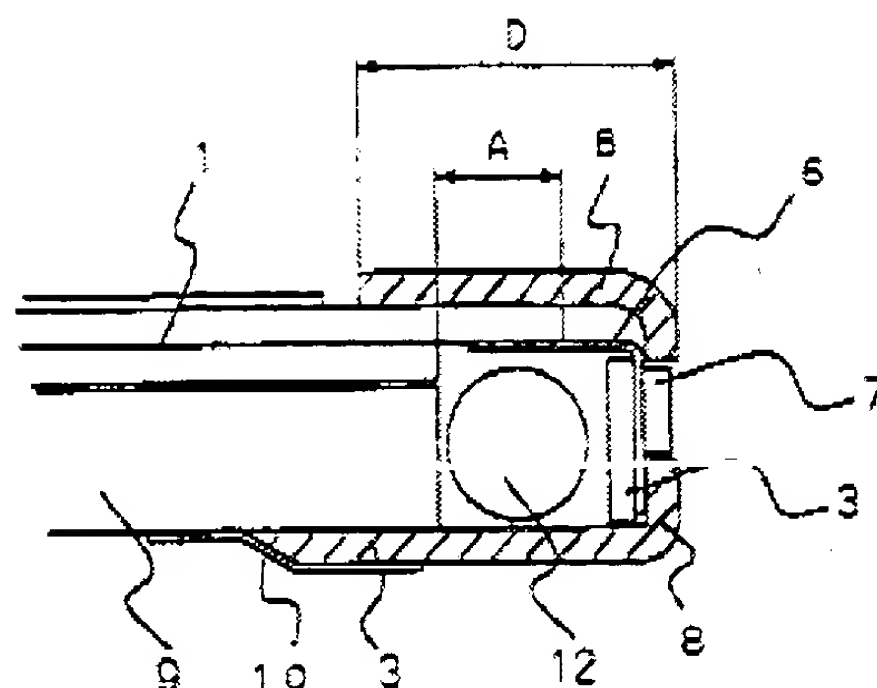


FIG. 7

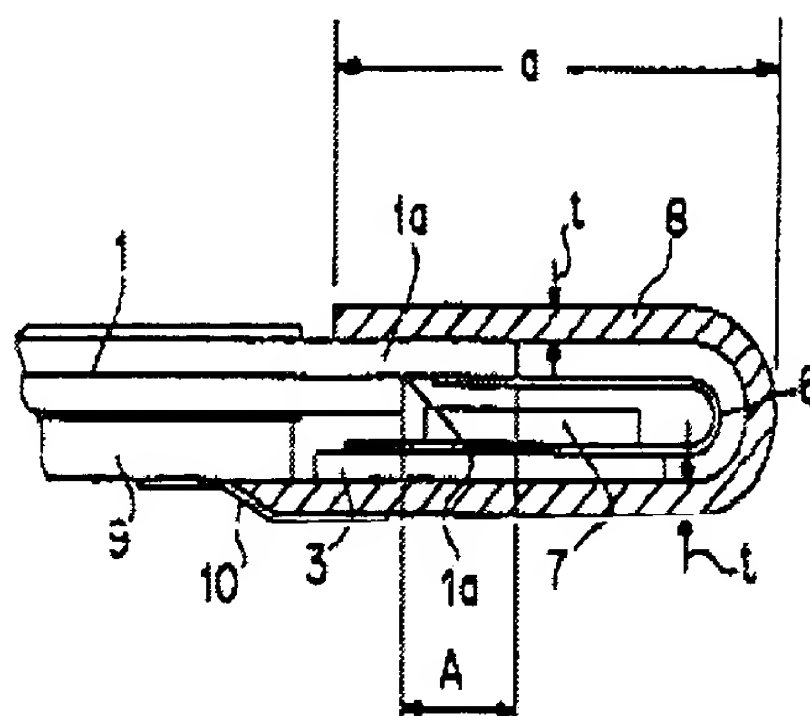
Hashimoto discloses several embodiments of a liquid crystal display device utilizing flexible circuit boards with integrated circuits mounted thereon, wherein the flexible circuit boards are bent into spaces behind the LCD substrate in order to minimize weight and size (summary of the invention, col. 2, line 31 through col. 3, line 26).

Hashimoto teaches, while the invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art (col. 11, lines 8-15).

Hashimoto is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a recess as needed to receive a circuit board in a frame.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD with a recess for receiving the circuit board in the frame.

As to claims 2-4, Hashimoto discloses in Figure 3, a recessed portion between glass, 1a, and Integrated circuit, 7, (Applicant's portion of the receiving recess at the upper end of the outer side surface) of the device is deeper than a recessed portion between the liquid crystal display panel, 1, and the circuit board, 3, (Applicant's portion of the receiving recess at the lower end) thereof.

**FIG. 3**

As to claim 5, mere direction of bend of a separating support member separated from the chassis is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

As to claim 8, mere use of a fixing film in which one end thereof is attached to the inner surface of the chassis and the other end thereof is fixed to the bottom surface of

Art Unit: 2871

the mold frame, pressing the flexible circuit board towards the inner side of the receiving recess is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

As to claim 9, mere use of a bonding material or a bonding tape for fixing the bottom surface of the mold frame and the end portion of the fixing film which is opposite to the bottom surface of the mold frame is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

As to claim 12, mere use of a resilient member which fixes the flexible circuit board installed between the rear side surface of the flexible circuit board which is received in the receiving recess and the inner side surface of the chassis is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

As to claim 13, mere use of an integral support member which is fixed to the chassis which is provided at a side wall portion of the chassis which corresponds to the flexible circuit board is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

As to claim 14, mere use of an integral support member comprised of a resilient material is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

As to claim 23, mere use of an integrated printed circuit board having a source portion for providing a data driving signal to the liquid crystal display panel through a data line of the liquid crystal display panel and a gate portion for providing a gate driving signal to a gate line of the liquid crystal panel, and the flexible circuit board is a gate side flexible circuit board which is attached to the gate side of the liquid crystal display panel to transfer the gate driving signal from the integrated printed circuit board to the liquid crystal display panel is considered an obvious design alternative of the invention of Hashimoto, not patentably distinct.

Allowable Subject Matter

3. Claims 6, 7, 10, 11, and 15-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 6, 7, 10, 11, and 15-22, a search of relevant prior art of record did not disclose, alone or in combination, the specific design features, and the claimed design feature recitations are not considered obvious design alternatives.

The closest reference is Hashimoto, but Hashimoto does not disclose nor render obvious the level of design specificity found in claims 6, 7, 10, 11, and 15-22.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (703) 305-0418. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8745 for regular communications and (703) 308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

Timothy L Rude
Examiner
Art Unit 2871

TLR
July 24, 2002

John
TOANTON
PRIMARY EXAMINER